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EXAMINER

NGUYEN, KHAI N

ART UNIT	PAPER NUMBER
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2614

NOTIFICATION DATE	DELIVERY MODE
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ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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Office Action Summary	Application No. 10/817,575	Applicant(s) LAMBERTON ET AL.	
	Examiner KHAI N. NGUYEN	Art Unit 2614	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 November 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Applicant's amendment filed on June 19, 2007 has been entered. Claims 1, 20, and 28 have been amended. No claims have been canceled. No claims have been added. Claims 1-29 are still pending in this application, with claims 1, and 22 being independent.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claim 20 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 20 amended with a new added feature "readable storage medium embedded with computer code", and this feature was not described in the instant application's original specification, original claims and original figures. This is a new matter. The new matter must be cancelled.

Art Unit: 2614

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 20-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 is claimed "A method - - -", but the dependent amended claim 20 is claimed "A computer readable storage medium with computer code - - -", and the dependent claim 21 recites "- - - a computer program code as claimed in claim 20". Therefore, it is unclear what is being claimed. Appropriate correction is required.

Claim Rejections - 35 USC § 101

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 20 and 21 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claim 20 recites "a computer readable storage medium embedded with computer code", and claim 21 recites "- - - using a computer program code - - -". And therefore these claims did not fall within at least one of the four enumerated categories of patentable subject matter recited in section 101 (i.e., process, machine, manufacture, or composition of matter). Claim 20 is drawn toward a computer readable storage

Art Unit: 2614

medium, and it cannot be concluded that "a computer readable medium embedded with computer code" is executable by a computer; as a result the medium is just code or instructions and therefore fails to fall within a statutory category under § 101. Software instructions or code, or a mere program listing are nonstatutory subject matter. Logic, or software, or any type of "functional descriptive material", is not statutory when claimed as descriptive material, per se. See pages 50-57 of "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility".

Claims 1-29 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

These method claims (1-29) according to the specification (page 7 lines 20-22) can be performed by "a computer program code". Therefore, these method claims are interpreted as software claims which are non-statutory. Software instructions or code, or a mere program listing are nonstatutory subject matter. Logic, or software, or any type of "functional descriptive material", is not statutory when claimed as descriptive material, per se. See pages 50-57 of "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility".

Claim Rejections - 35 USC § 103

7. Claims 1-8 and 16-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roque et al. (U.S. Publication 2002/0186687 A1 hereinafter "Roque") in view of Sun et al. (U.S. Publication 2002/0188650 A1 hereinafter "Sun").

Regarding claims 1-3, Roque teaches a method of controlling a local process that forms part of a first processing entity (Fig. 3, 121-122 "ASP") said first processing entity maintaining a plurality of associations with a plurality of remote processes in a second processing entity (Fig. 3, 131-132 "GSP"), said method comprising the steps of:

- receiving a failure message from a remote process (Fig. 6, 30-2 SGPIA/SGPDOWN) indicating a fault affecting an association linking the local process (Fig. 6, ASP-X) with that remote process (Figs. 6-12, paragraphs [0335]-[0336] hereinafter "par", i.e., remote process "SGP-A' sends an SGPDOWN "failure" message);
- queuing data messages destined for that remote process (Figs. 6-12, par [0385], i.e., stop signaling traffic messages);
- controlling the transmission of an acknowledgement (Figs. 6-12, SGPIA-ACK/SGPDOWN-ACK) of the failure message (Fig. 10, par [0372], i.e., a "communication down indication") so that the data messages pending on the association are received at that remote process (Figs. 6-12, par [0355]); and
- initiating a traffic diversion to set up an alternate path between said first processing entity and said second processing entity for queued data messages (Figs. 6-12 "SGPIA

or SGPDOWN is received”, par [0350]-[0354], i.e., either use an alternate SGP that is active or start an activation procedure).

However, Roque does not explicitly disclose controlling the delayed acknowledgement of the failure message with the delay that can be set with a predeterminable time period, so that the data messages pending on the association are received at that remote process before the acknowledgment of the failure message.

In the same field of endeavor, Sun teaches an explicit, delayed acknowledgement messages protocol to control when to send an acknowledgement message (Sun – par [0014] lines 1-9), and it is old and well known in the art that the explicit delay **is inherent** “a predeterminable time period” by design. Also, Sun teaches a traffic diversion to set up an alternate path when a failure occurs (Sun – par [0014] lines 12-16) and it is old and well known in the art that traffic diversion is a must when a failure occurs in a highly redundancy/fault tolerant system.

The advantage of Sun’s method is the protocol sends an acknowledgement with an explicit controlled delay to ensure the completion of pending messages before the acknowledgement would be sent and traffic being diverted when a failure occurs (Sun – par [0014]-[0015]).

It would have been obvious to a person of ordinary in the art at the time of the invention was made to apply a known technique to a known device (i.e., using the delayed acknowledgement of the failure message to ensure the data messages pending

on the association are received at the remote process before the acknowledgement of the failure message) ready for improvement to yield predictable results (see KSR – MPEP 2143).

Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to incorporate the explicit delayed acknowledgement protocol and divert traffic, as taught by Sun, into Roque's method in order to enhance the acknowledgement step when a failure occurs.

Regarding claims 4 and 5, Roque teaches a method wherein the delay is determined by transmission and acknowledgment of a heartbeat message (par [0059], i.e., heartbeat message SIGTRAN UA standard protocol runs over a transport layer) and wherein the controlling comprises sending the acknowledgement of the failure message on the data stream used for the data messages (Fig. 6, par [0355]).

However, Roque does not specifically disclose the delay. But, Sun teaches an explicit delayed acknowledgement messages protocol (Sun –par [0014]). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the delay time by using the time for transmission and acknowledgement of a heartbeat message.

Regarding claims 6-8, Roque teaches a method comprising testing the association to determine if the association is active and, if not, dropping messages queued for the association (par [0058], i.e., leans on the status of the SCTP-

association); a plurality of associations between a plurality of local processes and a plurality of remote processes (Figs. 3-4, par [0065], and par [0071]); and informing other local processes of the fault so that such other local processes can avoid involving the failed association in traffic diversion procedures initiated by them (Figs. 13-14, par [0400], i.e., received “SG_INACTIVE/SG_DOWN”, then such ASP will send a notification to all Signaling Gateway Processes (SGPs) connected to it).

Regarding claim 16, Roque teaches a method wherein the message indicating the fault is an ASP_INACTIVE or ASP_DOWN message (Fig. 6, 30.1, ASP-DOWN/ASPIA “inactive”, and ASPDOWN-ACK/ ASPIA-ACK) and the acknowledgement being respectively an ASP_INACTIVE_ACK message or an ASP_DOWN_ACK message (Fig. 6, 30.1, par [0047]-[0048], par [0052]-[0053], and [0330]-[0331]).

Regarding claims 17-19, Roque teaches a method comprising the initiating of a switch back procedure to include a new association linking a local process with a remote process (Figs. 15-16, par [0417]-[0423], i.e., ASP to change the status of a SG to “SG_ACTIVE”); informing other local processes of the new association so that such other local processes can begin involving the new association (Figs. 15-16, par [0417], i.e., send notification “SG active” to all SGPs); and wherein the associations are SCTP associations (Fig. 2, 109, Fig. 5, 129, par [0071] and par [0126], i.e., connections are made using SCTP as transport protocol “called in SIGTRAN’s terminology SCTP-associations”).

Regarding claims 20-21, Roque teaches a signaling gateway comprising a plurality of local processes that are controlled using a computer program code element (par [0068], i.e., logical entity that performs in both SG “signaling gateway” and AS “application server”).

8. Claims 9-12, and 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roque in view of Sun as applied to claims 1 and 7 above, and further in view of Performance Technologies – Tutorial: Interworking Switched Circuit and Voice-over-IP Networks, August 22, 2001, hereinafter “Performance”.

Regarding claims 9-12 and 14-15, Roque teaches a method comprises determining the messages are TCAP messages and/or non TCAP messages (par [0009], i.e., SCCP, MAP, TCAP); and further comprising determining whether pending messages form part of a stateful or stateless transaction, and, if so, finding an alternative local process to provide an alternative path to the same remote process or to another remote process (par [0025], i.e., a set of User Adaptation (UA) layer “one per type of protocol to be transported”, and par [0056] –[0057]), wherein the first processing entity is a signaling gateway (Fig. 5, 50 “SGP”), the local processes being signaling gateway processes having a common point code or set of point codes (Fig. 2, MTP3, Fig. 5, par [0009], i.e., MTP3 unique address for a node, and par [0016]), and wherein the second processing entity is an application server (Fig. 5, 60 “ASP”), the remote

Art Unit: 2614

processes being application server processes having a common routing key (Fig. 5, par [0037 and par[0041], i.e., SIGTRAN routing key “RK”).

However, Roque does not specifically disclose the stateful, stateless, and point codes.

In the same field of endeavor, Performance teaches the method and system to provide signaling in the Switched Circuit and VoIP networks that include the TCAP signaling messages using the SCCP (Performance – page 4 second paragraph), connectionless “stateless” and connection-oriented “stateful” transports with the Signaling System 7 (SS7) messages are being routed to the SG based on point code (Performance - page 11, paragraphs 2nd-4th). The stateless “connectionless” and stateful “connection-oriented” terminologies are being equivalently used in SIP protocol (Performance – page 12, paragraphs 5th-6th, also see http://en.wikipedia.org/wiki/Connectionless_protocol).

Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to incorporate the detail about stateless, stateful and point code, as taught by Performance’s tutorial, into Roque's method in order to enhance the transport of the Switched Circuit signaling messages.

9. Claims 13, 22-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roque in view of Sun, and in view of Performance, and further in view of Suzuki (U.S. Patent Publication 2002/0156925 A1).

Regarding claim 13, Roque, Sun and Performance disclose everything claimed as applied above (see claim 1). However, Roque, Sun and Performance do not specifically disclose wherein the traffic diversion comprises modifying routing tables.

In the same field of endeavor, Suzuki teaches a method and system of SS7 network with a Signaling Gateway (Suzuki - Fig. 1) that when a failure is occurred, find an alternate path and modifying the routing table (Fig. 5, S14-S20, par [0060], i.e., detects a failure and determines destinations based on SLS, par [0063], i.e., creates the routing table and sends it to the SGPs).

Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to incorporate the detail about modifying the routing table, as taught by Suzuki, into Roque's method in order to enhance the transport of the Switched Circuit signaling messages.

Regarding claims 22 and 29, Roque teaches a method of recovering failure in a distributed signaling gateway maintaining a plurality of associations between signaling gateway processes of said distributed signaling gateway and application server processes of an application server (Fig. 1, 121-122 "Application Servers (ASs)", Fig. 1, 131-132 "Signaling Gateways (SGs)", par [0125]), said method comprising the steps of:

initiating a traffic diversion in response to a failure message to set up an alternate path between said signaling gateway processes and said application server processes in ease of fault affecting an association (Fig. 12 “SGPIA or SGPDOWN is received”, par [0350]-[0354], i.e., either use an alternate SGP that is active or start an activation procedure).

initiating a switch back to include a new association linking a signaling gateway process and an application server process (Figs. 15-16, par [0417]-[0423], i.e., ASP to change the status of a SG to “SG_ACTIVE”).

according to the change of status of any association, updating routing tables capable of routing data messages received by said signaling gateway processes to its destined application server processes (Figs. 6-12, par [0317]-[0321], i.e., SGP-A wants to actively serve for traffic messages, then ASP-X will update the status of SGP, as well as the routing information elements (RIE)); and

distributing sequentially messages from said signaling gateway to said plurality of application server processes according to said routing tables, and said routing table are SLS routing table (Figs. 6-12, par [0350]-[0354]).

However, Roque and Sun do not specifically disclose in detail about updating the SLS routing tables and distributing sequentially messages of the failed signaling gateway.

In the same field of endeavor, Suzuki teaches a method and system of SS7 network with a Signaling Gateway (Suzuki - Fig. 1) that when a failure is occurred, updates the routing table (Suzuki - Fig. 5, S14-S20, par [0060], i.e., detects a failure and determines destinations based on SLS, par [0063], i.e., creates the routing table and sends it to the SGPs), and distributing sequentially messages of the failed signaling gateway (Suzuki - Fig.1, Fig. 5, par [0064], i.e., guarantee of an order of sending signal since the SLS information included in the signals is not changed).

Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to incorporate the detail about updating the SLS routing table and distributing sequentially messages, as taught by Suzuki, into Roque's method in order to enhance the transport of the Switched Circuit signaling messages.

Regarding claims 23 -25, and 28, Roque teaches a method wherein said step of initiating a traffic diversion and switch back further comprising the steps of:

- starting a protection timer (par [0061] – lines 2-5, i.e., heartbeat time-out);
- queuing messages destined for the application server process of the new association (Fig. 12, par [0385], i.e., stop signaling traffic messages);
- informing other signaling gateway processes (Fig. 13 - paragraph [0398], i.e., sending status notification to all SGPs connected to it);
- controlling the transmission of an acknowledgement (Figs. 6-12, par [0355]); and

finding alternate path/active signaling gateway to forward/divert subsequent stateless/non-TCAP or stateful/TCAP processing messages onto another application server process through another association or through an alternate signaling gateway process still associated with the same application server process (Fig. 12 “SGPIA or SGPDOWN is received”, par [0350]-[0354], i.e., either use an alternate SGP that is active or start an activation procedure), and TCAP and non-TCAP messages identified by transaction identification numbers (par [0077]-[0078], i.e., message class “MC” and message identifier “MI”); and

re-computing said routing tables (par [0404]-[0407], i.e., additional routing information element);

Roque does not explicitly disclose controlling the acknowledgement, and the stateful and stateless processing messages. However, Sun teaches an explicit, delayed acknowledgement messages protocol to control when to send an acknowledgement message (Sun – par [0014] lines 1-9), Performance teaches the TCAP signaling messages using the SCCP (Performance – page 4 second paragraph), connectionless “stateless/non-TCAP” and connection-oriented “stateful/TCAP” transports with the Signaling System 7 (SS7) messages are being routed to the SG (Performance - page 11), and Suzuki teaches when a failure is occurred, updates the routing table (Fig. 5, S14-S20, par [0060], i.e., detects a failure and determines destinations based on SLS, par [0063], i.e., creates the routing table and sends it to the SGPs).

It would have been obvious to a person of ordinary in the art at the time of the invention was made to apply a known technique to a known device (i.e., using delayed acknowledgement message, stateless and stateful processing messages, and updating the routing table in routing signaling messages) ready for improvement to yield predictable results (see KSR – MPEP 2143). Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to incorporate the detail about controlling the acknowledgement, stateless and stateful processing messages, and updating the routing table, as taught by Sun, Performance and Suzuki, into Roque's method in order to enhance the transport of the Switched Circuit signaling messages.

Regarding claims 26-27, Roque teaches the method wherein said signaling gateway is coupled to a signaling end point across a signaling system No. 7 network, and wherein each signaling gateway process of said signaling gateway is coupled to each application server process across an internet protocol network (Figs. 1-4, par [0004]-[0011], i.e., PSTN, ISDN, IP networks with SGPs and ASPs with several protocols via SS7 (e.g., Q.931, MTP, MTP3, etc.)).

Response to Arguments

10. Applicant's arguments filed May 1, 2008 have been fully considered but they are not persuasive.

Regarding claims 1-29 rejection under 35 U.S.C. § 101 as being directed to non-statutory subject matter, Applicants argue that claims 1-29 are method claims which are statutory subject matter (See page 8 lines 14-27 of Applicants' Remarks).

The Examiner respectfully disagrees. As stated in the rejection above, the Applicants' specification clearly shows that the method can be performed by a computer program code (See instant application's specification page 7 lines 20-22) and therefore claims 1-29 can be interpreted as software claims which are non-statutory. Software instructions or code, or a mere program listing are non-statutory subject matter. Logic, or software, or any type of "functional descriptive material", is not statutory when claimed as descriptive material, per se. See pages 50-57 of "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility".

Regarding the amended independent claim 1, Applicants argue that Roque et al. (U.S. Publication 2002/0186687 A1 hereinafter "Roque") in combination with Sun et al. (U.S. Publication 2002/0188650 A1 hereinafter "Sun") does teach or suggest at least "controlling the transmission - - - the failure message" and "initiating a traffic diversion - - - for queued data messages," (See page 11 lines 12-18 of Applicants' Remarks).

The Examiner respectfully disagrees. Roque clearly discloses controlling the transmission of an acknowledgement of the failure message (Figs. 6-12, SGPIA-ACK/SGPDOWN-ACK, par [0355]), and par [0372], i.e., a "communication down indication"), and Sun is clearly discloses an explicit, delayed acknowledgement messages protocol to control when to send an acknowledgement message (Sun – par

Art Unit: 2614

[0014] lines 1-9). And therefore, the combination of Roque and Sun disclose the method to control the transmission of an acknowledgement of the failure message so that data messages pending on the association are received at that remote process before the acknowledgment of the failure message. Roque individually discloses to initiate a traffic diversion to set up an alternate path between said first processing entity and said second processing entity for queued data messages (Figs. 6-12 "SGPIA or SGPDOWN is received", par [0350]-[0354], i.e., either use an alternate SGP that is active or start an activation procedure). Therefore, Roque and Sun combination does disclose each of the claimed limitations of independent claim 1.

Similar to claim 1, Applicants' arguments regarding dependent claims 2-8 and 16-21 have been considered and are not persuasive for the same reasons as those set forth in the preceding paragraphs. Also, for the same reasons set forth above, dependent claims 9-12 and 14-15 are being unpatentable over Roque in view of Sun and Performance Technologies.

Regarding independent claim 22, Applicants' argue that Suzuki individually or in combination with Roque, Sun, and Performance Technologies fails to teach or suggest at least "according to - - - server processes" and "distributing sequentially - - - routing tables," (See page 14 lines 18-24 of Applicants' Remarks).

The Examiner respectfully disagrees. Roque clearly discloses that according to the change of status of any association, updating routing tables capable of routing data messages received by said signaling gateway processes to its destined application server processes (Figs. 6-12, par [0317]-[0321], i.e., SGP-A wants to actively serve for

traffic messages, then ASP-X will update the status of SGP, as well as the routing information elements (RIE)); and Suzuki discloses to distribute sequentially messages from said signaling gateway to said plurality of application server processes according to said routing tables, and said routing table are SLS routing table (Suzuki – Fig. 1, Fig. 5, par [0060], and par [0064]). Therefore, Roque, Sun, Performance Technologies and Suzuki combination does disclose each of the claimed limitations of independent claim 22.

Similar to claim 22, Applicants' arguments regarding the dependent claims 23-29 have been considered and are not persuasive for the same reasons as those set forth in the preceding paragraphs.

Conclusion

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Art Unit: 2614

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KHAI N. NGUYEN whose telephone number is (571)270-3141. The examiner can normally be reached on Monday - Thursday 6:30AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ahmad F. Matar can be reached on (571) 272-7488. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/K. N. N./
Examiner, Art Unit 2614

08/11/2008

/Ahmad F MATAR/
Supervisory Patent Examiner, Art Unit 2614